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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/826,215	04/16/2004	Brian Hang Wai Yang	RAZA-04601	1173

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EXAMINER	
MAHMOUDZADEH, NIMA	
ART UNIT	PAPER NUMBER
2619	
MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/826,215	YANG ET AL.	
	Examiner	Art Unit	
	NIMA MAHMOUDZADEH	2619	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 January 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Priority

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 60/463,992, filed on 04/18/2003.

Response to Arguments

Applicant's arguments with respect to claims 1-12 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dai et al. (US Patent No. 6,246,692) in view of Christensen et al. (US Patent No. 5,491,687).

Regarding claim 1, Dai et al. teach a stacked switch using a resilient packet ring protocol comprising:

a plurality of switch modules (Fig. 1, 12) coupled to one another in a ring topology (Fig. 1, 10) and each having a plurality of external terminals (Fig. 1, A0'-A7') for interfacing with external devices, where each switch module includes:

an external interface (Fig. 1, A0'-A7') for communicating with the external terminals, the external interface configured to communicate using a communication protocol (In Fig. 1, A0'-A7' are connected to LAN/ Ethernet); and

an internal interface (Fig. 1, ports 22 and 16 of Switch B) for communicating with other switches, the internal interface using a resilient packet ring (RPR) protocol (In Fig. 1, link 18 is the Data Ring and link 24 is defined as Control Ring);

wherein a link aggregation port is selectively aggregated to respond to the link signal and to dynamically set one or more switch modules' external terminals to selectively aggregate information to and from the switch modules (See column 11, lines 27-44 for the allocation of channels and releasing the channels utilizing the counter).

wherein messages associated with a communication of data through at least one of the switch modules are stored (In Fig. 2A, each port equipped with buffer and also an External Packet buffer 168), but Dai et al. fail to explicitly and clearly teach that the message is statistics gathered from the ports. However, Christensen et al. teach that

the message is statistics gathered from the port (In Fig. 1, port 74, also, column 4, lines 21-40, port 74 maintain current port statistics of good and bad frames passing through and the operational status of the port); and

wherein the message are evaluated to generate a link signal representative of desired links/ports to be aggregated (The source reservation protocol manages the bandwidth allocation and capacity for the source-destination before the transfer begins. Based on the response to the message sent to the destination enough bandwidth is allocated for the transaction. See column 10, lines 8-67 and also see column 11, lines 27-44 for the allocation of channels and releasing the channels). But, Dai et al. fail to explicitly and clearly teach that the message is the statistics gathered from the port. However, Christensen et al. teach that the message is statistics gathered from the port (In Fig. 1, port 74, also, column 4, lines 21-40, port 74 maintain current port statistics of good and bad frames passing through and the operational status of the port).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the message of Dai et al. to include statistics disclosed by Christensen et al. in order to be able to manage the port's traffic by utilizing the obtained data from the ports.

Regarding claim 2, Dai et al. teach the stacked switch of claim 1, wherein each switch module further includes:

a controller coupled to the external interface and the internal interface and configured to selectively communicate information between the external interface and the internal interface (Fig. 2A, CRMT Unit 100).

Regarding claim 3, Dai et al. teach the stacked switch of claim 2, further comprising:

a master management processor coupled to one or more of the switch modules and configured to provide instructions regarding the communication of information between each switches' external interface and internal interface, and to control data flow (Fig. 2A, CONTROL RING MESSAGE PASSBY PROCESSING UNIT, 70); and

a slave management processor coupled to the master management processor through at least one switch and one or more of the switch modules and configured to provide the instructions regarding the communication of information between each switches' external interface and internal interface, and to control the data flow (Fig. 2A, CONTROL RING MESSAGE TERMINAL PROCESSING 100).

Regarding claim 4, Dai et al. teach the stacked switch of claim 3 further comprising wherein:

the master management processor is configured to assign a master/slave relationship based on predetermined criteria (Fig. 2A, 70 and 100); and

the slave management processor is configured to become another master management processor if the master management processor fails (In Fig. 2A, 100 can be defined to act as 70 and transmit data from 66 to 86).

Regarding claim 5, Dai et al. teach the stacked switch of claim 3, further comprising where in:

the link aggregation port is coupled to one or more switch modules' external terminals and configured to selectively aggregate the information to and from the switch

modules (See column 11, lines 27-44 for the allocation of channels and releasing the channels utilizing the counter. Also see Fig. 2, ports A0'-A7' and A0" and A7").

Regarding claim 6, Dai et al. teach the stacked switch of claim 5, further comprising:

a memory configured to store the messages associated with the communication of data through the at least one switch module (In Fig. 2A, each port equipped with buffer and also an External Packet buffer 168), but Dai et al. fail to teach that the message is statistics gathered from the port. However, Christensen et al. teach that the message is statistics gathered from the port (In Fig. 1, port 74, also, column 4, lines 21-40, port 74 maintain current port statistics of good and bad frames passing through and the operational status of the port);

wherein the master management (Fig. 2A 70 and 100) processor is configured to evaluate the messages in the memory (Fig. 2A, 162, 146, and 168) and to generate the link signal representative (Fig. 4, SRC_REQ) of the desired links/ports to be aggregated (In column 10, lines 29-65, a control signal has been developed), but Dai et al. fail to teach that the message is statistics gathered from the port. However, Christensen et al. teach that the message is statistics gathered from the port (In Fig. 1, port 74, also, column 4, lines 21-40, port 74 maintain current port statistics of good and bad frames passing through and the operational status of the port)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the message of Dai et al. to include statistics disclosed by Christensen et al. in order to be able to manage the port's traffic by utilizing

the obtained data from the ports.

Regarding claim 7, Dai et al. teach the stacked switch of claim 6, wherein:

the master management processor is configured to introduce marker information into the data to ensure that the integrity of the data is reasonably maintained when a link aggregation is modified (In Column 11, lines 27-55, the counter can be a marker that by increasing the counts channels are allocated or released and also, column 7, lines 31-44).

Regarding claim 8, Dai et al. teach a method of switching data through a stacked switch using a resilient packet ring protocol, the stacked switch having a plurality of modules, where each module includes an external interlace for communicating with external terminals and an internal interface for communicating with other switches using a resilient packet ring (RPR) protocol, comprising:

selectively activating a link aggregation port (In column 11, lines 27-55, the Bandwidth Resource Manager increases or decreases the bandwidth based on the need) to respond to the link signal and to dynamically set one or more switch modules' external terminals to selectively aggregate information to and from the switch modules (In column 11, lines 27-55, the Bandwidth Resource Manager increases or decreases the bandwidth based on the bandwidth required. Also see Fig. 2A, A0'-A7' and A0"-A7");

storing messages associated with a communication of data through at least one module in a switch (In Fig. 2A, each port equipped with buffer and also an External Packet buffer 168), but Dai et al. fail to teach that the message is statistics gathered from the port. However, Christensen et al. teach that the message is statistics gathered

from the port (In Fig. 1, port 74, also, column 4, lines 21-40, port 74 maintain current port statistics of good and bad frames passing through and the operational status of the port); and

evaluating the messages in the memory and to generate a link signal representative of desired links/ports to be aggregated (The source reservation protocol manages the bandwidth allocation and capacity for the source-destination before the transfer begins. Based on the response to the message sent to the destination enough bandwidth is allocated for the transaction. See column 10, lines 8-67 and also see column 11, lines 27-44 for the allocation of channels and releasing the channels). But, Dai et al. fail to teach that the message is the statistics gathered from the port. However, Christensen et al. teach that the message is statistics gathered from the port (In Fig. 1, port 74, also, column 4, lines 21-40, port 74 maintain current port statistics of good and bad frames passing through and the operational status of the port).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the message of Dai et al. to include statistics disclosed by Christensen et al. in order to be able to manage the port's traffic by utilizing the obtained data from the ports.

Regarding claim 9, Dai et al. teach the method of claim 8, further comprising: selectively introducing marker information into the data to ensure that the integrity of the data is reasonably maintained when a link aggregation is modified (In Column 11, lines 27-55, the counter can be a marker that by increasing the counts channels are allocated or released and also, column 7, lines 31-44).

Regarding claim10, Dai et al. teach the method of claim 8, but fail to teach the method wherein the statistics are based on port traffic. However, Christensen et al. teach the method wherein the statistics are based on port traffic (Column 4, lines 17-39, the statistics are based on the good and bad data passing through the port).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the message of Dai et al. to include statistics disclosed by Christensen et al. in order to be able to manage the port's traffic by utilizing the obtained data from the ports.

Regarding claim 11, Dai et al. teach the method of claim 8, further comprising sending a marker to facilitate handover from a first port to a second port (In column 11, lines 27-55, the marker can be the counter that by increasing or decreasing the counts channels are allocated or released).

Regarding claim 12, Dai et al. teach the method of claim 8, wherein local ports on the switch are aggregated (In column 11, lines 27-55, channels are allocated or released according to the bandwidth resource manager).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ng et al. (US Patent Publication 2004/0049564) teach a method and apparatus for network storage flow control.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NIMA MAHMOUDZADEH whose telephone number is (571)270-3527. The examiner can normally be reached on Monday - Friday, 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chirag G. Shah can be reached on (571) 272-3144. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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